

## RESEARCH PAPER

# How the health belief model helps the tobacco industry: individuals, choice, and "information"

Edith D Balbach, Elizabeth A Smith, Ruth E Malone

*Tobacco Control* 2006;15(Suppl IV):iv37–iv43. doi: 10.1136/tc.2005.012997

See end of article for authors' affiliations

Correspondence to:  
Dr Edith D Balbach,  
Community Health  
Program, Tufts University,  
112 Packard Avenue,  
Medford, MA 02155,  
USA; edith.balbach@tufts.  
edu

Received 17 June 2005  
Accepted 11 January 2006

**Objective:** To analyse trial and deposition testimony of tobacco industry executives to determine how they use the concepts of "information" and "choice" and consider how these concepts are related to theoretical models of health behaviour change.

**Methods:** We coded and analysed transcripts of trial and deposition testimony of 14 high-level executives representing six companies plus the Tobacco Institute. We conducted an interpretive analysis of industry executives' characterisation of the industry's role as information provider and the agency of tobacco consumers in making "choices".

**Results:** Tobacco industry executives deployed the concept of "information" as a mechanism that shifted to consumers full moral responsibility for the harms caused by tobacco products. The industry's role was characterised as that of impartial supplier of value-free "information", without regard to its quality, accuracy and truthfulness. Tobacco industry legal defences rely on assumptions congruent with and supported by individual rational choice theories, particularly those that emphasise individual, autonomous decision-makers.

**Conclusions:** Tobacco control advocates and health educators must challenge the industry's preferred framing, pointing out that "information" is not value-free. Multi-level, multi-sectoral interventions are critical to tobacco use prevention. Over-reliance on individual and interpersonal rational choice models may have the effect of validating the industry's model of smoking and cessation behaviour, absolving it of responsibility and rendering invisible the "choices" the industry has made and continues to make in promoting the most deadly consumer product ever made.

Within public health, several well-known theories of health education, including the health belief model<sup>1</sup> and the theory of reasoned action,<sup>2</sup> are based on the idea of an individual, rational decision maker. Such individuals presumably have the right and ability, given a set of plausible alternatives, to select independently the products, services, or actions that they view as being in their best interest. Key features of these theories are notions of *choice* or decision-making (which implies choice), and *information*. Tobacco control interventions based on these theories focus on individually focused interventions designed to affect decision-making.

Critics argue that these theories are inadequate, because they fail to account for important environmental differences among individuals, including unequal access to or imperfect information, choices that are constrained by economic and other disadvantages, interdependence, and the role of consumer culture in shaping behaviour choices.<sup>3</sup> In contrast, social-ecological models of tobacco control focus on creating environmental changes to influence behaviour and thus rely on complex, multi-level, multi-sectoral interventions.<sup>4,5</sup>

The distinction between these two types of models is important in tobacco control, because by ignoring larger structural factors that shape health and health behaviours, individual-level, rational choice models may function to support powerful corporate interests. Little previous work has explored this relationship, and this omission is problematic. Corporate interests, such as the tobacco industry, have the resources and power to shape environments that influence consumers to behave in ways detrimental to their health, while asserting that all they are doing is offering a "choice".

Drawing on a review of transcripts from depositions and trial testimony by tobacco industry executives, we argue that tobacco industry legal defences rely on assumptions

congruent with and supported by individual rational choice theories, and, therefore, that tobacco control advocates and health educators must emphasise multi-level, multi-sectoral interventions as the key to tobacco use prevention. Programmes based entirely or predominantly on notions of individual decision-making are less effective in tobacco control efforts. Further, they may inadvertently lend support to the tobacco industry's preferred framing of tobacco-caused diseases as the result of "unfortunate but informed" individual choices.

## THEORETICAL FRAMEWORK

Rational choice theories constitute an extensive body of work originally arising out of economics and the attempt to explain economic activity. Over the last several decades, key elements of rational choice theories have become highly influential across multiple disciplines. Rational choice theories rely upon several linked notions. First, they characterise human beings as individuals whose basic motivation for action is self-interest. Second, they understand action as the result of a process of ranking preferences and making choices based on those rankings.<sup>6</sup> Such preferences are assumed to be fairly stable, and those preferences are based on individual appraisals of information. Several theories of health education fall into the category of "rational choice". These include the health belief model, the theory of reasoned action, and the theory of planned behaviour.<sup>1,2</sup>

The health belief model is based on value-expectancy theory,<sup>1</sup> which draws on rational choice assumptions. A key feature of the health belief model is that people have choices and are capable, when presented with information, of

**Abbreviations:** B&W, Brown and Williamson; DATTA, Deposition and Trial Testimony Archive; RJR, RJ Reynolds

making good decisions about their health.<sup>7</sup> This model suggests that whether or not individuals take action to protect their health depends on whether they believe: (1) that they are susceptible to a condition; (2) that the condition would have serious consequences; (3) that they have a course of action available to them that will help them avoid the condition; and (4) that the benefits of taking the action outweigh the costs. In the case of smoking, the health belief model would predict that people would quit smoking (or choose not to take it up) if their preference was to avoid cancer, heart disease, and other smoking-related illness, if they thought themselves susceptible to these diseases, and if they believed not smoking would help them achieve that goal.

A closely related theory in health education—the theory of planned behaviour<sup>2</sup>—suggests that behavioural and normative beliefs lead to intention to engage in a particular behaviour, which, in turn, leads to the desired outcome. According to this theory, we may not agree with individuals' choices but if we study the individuals, we will understand why they made those choices.<sup>2</sup> The theory of reasoned action<sup>2</sup> extends the theory of planned behaviour by introducing the concept of perceived behavioural control. The modification accepts that individuals may know what the “better” action is in terms of their health but may or may not believe they have the ability to implement it.

All of these theories rely on certain assumptions about *individuals and information*. People are assumed to be relatively independent of one another (rather than, for example, constituted by networks of relations), and to make appropriate choices for themselves as individuals on the basis of self-consciously rational processes. Information, in these models, is neutral and factual. Health belief models in tobacco control efforts typically, of course, present the decision not to use tobacco as the correct one but also assume that individuals understand what is influencing their behaviour; therefore it follows that individuals bear the responsibility for resisting or accepting those influences.

In this paper we examine how tobacco industry executives testifying under oath use these concepts of the individual and information. The testimony is a record of the executives from companies being called to account for the disease and death caused by their products, and their efforts to avoid taking legal responsibility. These efforts frequently involve implicating others for the consequences of tobacco use; in this context, the executives' reliance on the concepts of the individual and information is instructive for tobacco control.

## METHODS

This paper results from work pursued under the Deposition and Trial Testimony Archive (DATTA) project. The overall methods and sources of the DATTA project are described elsewhere in this supplement.<sup>8</sup>

We analysed a theoretical sample of the transcripts. A theoretical sample is selected based on the potential of the points in the sample to develop or expand insights.<sup>9</sup> For this research, we decided to read all of the transcripts from the chief executives of the major tobacco companies, based on our assumption that top company executives would both be influential in determining company positions and likely to be expressing official company positions. We made sure that we had executive testimony from each of the major tobacco companies (R.J. Reynolds (RJR), Philip Morris, Brown and Williamson (B&W), American Tobacco, Liggett and Meyers, and Lorillard). In addition, we read testimony from the chief executive officer of the Tobacco Institute, the lobbying arm of the tobacco industry, and from one Senior Vice President of Philip Morris. These individuals were added because we believed, based on our knowledge of their positions and their

activities as revealed in other work using tobacco industry documents, that they were positioned to understand official corporate positions on the public and smoking.

We developed a coding scheme by reading a selection of 24 transcripts from key individuals from different companies and noting key words/phrases/concepts that recurred or seemed important to the person testifying or being deposed. Each member of the study team read at least three transcripts, which provided a rich range of key themes. Such “emic” or inductive coding schemes are appropriate when trying to understand the conceptual structure of the people under study.<sup>10</sup> We refined our codes by discussing them with one another and offering examples until all were in agreement on the meanings associated with a code.

The resulting master coding plan was used to code all available transcripts of the testimony or depositions of 14 high-level executives representing six companies plus the Tobacco Institute (table 1). After the coding scheme had been applied to the initial set of transcripts by the research team, a trained research assistant at the University of California, San Francisco coded the additional transcripts, using the coding matrix the team had developed. For quality control, the second and third authors reviewed her coding. We analysed a total of 95 transcripts of testimony or depositions originally obtained from 1994 to 2001. For this paper, we iteratively reviewed and analysed all coded text related to how industry executives characterised the industry's role as information provider and the agency of tobacco consumers in terms of “choice” or decision-making. In reporting our findings, we have identified the executives' positions as they were reported in the transcripts.

This interpretive study has limitations. The DATTA materials may not have included other testimony and depositions that express different views. We make no claims of generalisability to all tobacco companies or all company executives. We also chose to examine only testimony from top executives, not scientists, marketing personnel and others whose testimony might differ. However, because top executives are typically charged with responsibility for articulating the company's position on issues, we believe our theoretical sampling strategy to be a reasonable approach. The number of transcripts from each individual was too small for us to make claims about changes to rhetorical strategies over time.

## RESULTS

### Smoking is an “adult choice”

The rational choice notions of *choice* and *information* figured prominently in the responses of the tobacco industry executives. Tobacco executives repeatedly emphasised that tobacco use behaviour was primarily a matter of individual choices or decisions. For example, Edward A. Horrigan, Chairman of the Liggett Group and previously CEO of RJR Tobacco Company, discussed an individual's apparent conscious calculation of benefits in deciding to smoke, equating it to jogging. According to Horrigan,

To me it's like any other form of pleasure, whether it's jogging, drinking beer or smoking cigarettes. If it provides a benefit to the person...in the eyes of the beholder, if it makes that person feel better about himself or herself,... There is a benefit, otherwise you would not sell the number of cigarettes that we sell every year...<sup>11</sup>

Robert Karl Heimann, CEO of American Tobacco, made a similar argument, asserting that “what people want to do is their own decision. It's not our decision.”<sup>12</sup>

Geoffrey Bible, CEO of Philip Morris Companies Inc also endorsed the concept of choice, saying that, “if there are

**Table 1** Testimony and depositions reviewed

Witness/deponent	Company, title, years in position	Years testimony reviewed
Edward A Horrigan, Jr	RJ Reynolds, Director, 1980–1989; Chairman & Chief Executive Officer, 1979–1983; President, 1979–1980; Chairman & Chief Executive Officer, 1987–1989. Liggett Group, Chairman, 1993–1994	1984, 1994, 1997, 2001
Robert Karl Heimann	American Tobacco Company, President and CEO, 1973–1980 American Brands, Chief Executive Officer, 1973–1980 Tobacco Institute, Director, 1963–1964 Retired at time of depositions	1985, 1986, 1988, 1990
Geoffrey Bible	Philip Morris, Chairman of the Board & CEO, 1995–2002 Philip Morris International, President and CEO, 1987–1990	1997, 1998, 2001, 2002 (from original testimony March 1998), 2003
James J Morgan	Philip Morris, President and CEO, 1994–1997	1997, 1998, 1999, 2000
Ellen Merlo	Philip Morris, Senior VP Corporate Affairs, 1994–2003	1993, 1997, 1998, 2000, 2001
Horace R Kornegay	Tobacco Institute, President 1970–1978, 1980, Chairman, 1985	1973, 1984, 1997
Samuel D Chilcote Jr	Tobacco Institute, President and Executive Director, 1981–1984	1992, 1997
Donald S Johnston	American Tobacco Company, President and CEO, 1994	1997, 1998, 1999
Stephen Goldstone	RJR Nabisco/RJ Reynolds Tobacco Company, CEO, 1997–1999	1997, 1998
Frederick Ross Johnson	Reynold's Industries, President, 1985; President & CEO 1987–1988	1997, 2001
Andrew H Tisch	Lorillard, Chairman and Chief Executive Officer 1989–1995; Co-chairman of Loews Corporation (Lorillard parent company), 1995–present	1997, 1998
Nicholas Brookes	Brown & Williamson, Chairman and CEO from 1995–present.	1997, 1999, 2000
Mike Szymanczyk	Philip Morris, CEO, 1997–present	2000
Bennett S Lebow	Vector Group (Liggett & Myers), Chairman of the Board, 1995–present	1997, 1998, 1999, 2000, 2001

people who are ill, and they are smokers, and they are adult smokers, I believe they have taken the free choice to smoke cigarettes.”<sup>13</sup> Similarly, James J Morgan, another CEO of Philip Morris, asserted: “People have a right to choose what they want to smoke. They, first of all, have a right to choose if they want to smoke. And they have a right to choose and are offered a whole variety of cigarettes for whatever they choose to use.”<sup>14</sup>

The view presented by these executives, then, is that the responsibility of cigarette manufacturers is simply to support the individuals’ right to choose to smoke and to offer them more choices among products. Moral agency is lodged only within individual consumers, who can choose to exercise those “rights”. If the consumer makes unfortunate choices, the industry and its products are not to blame. Ellen Merlo, Senior Vice President for Corporate Affairs at Philip Morris, when asked about harm from the company’s products, explicitly moved the responsibility to the consumer, saying, “People were hurt by making the choice to smoke.”<sup>15</sup>

### Addiction

But describing smokers as “adults” who have “chosen” to smoke, critics argue, is implausible because most people start smoking before they are adults<sup>16</sup> and nicotine is a powerfully addictive drug,<sup>17</sup> facts that industry documents suggest should have been well known to industry executives.<sup>18–20</sup> Philip Morris’s Bible explicitly acknowledged that addiction interfered with “free choice”, saying “I’m not a lawyer, but I would say that your choice is limited if you are addicted to something.”<sup>21</sup> Therefore, to invoke “choice”, executives had to discount addiction.

For example, Bible argued in 1998 that, although the Surgeon General described smoking as addictive,

We do not subscribe to that definition. We believe that that definition lacks some – some objective criteria such as the markers of intoxication or withdrawal symptoms.<sup>22</sup>

This point was also emphasised by Walker Merryman, from the Tobacco Institute, who thought it was not “proper to say that smoking a cigarette is the same thing as using heroin or crack”.<sup>23</sup> Merryman also rejected Surgeon General Koop’s characterisation of tobacco as addictive, saying that it “trivializes, and almost mocks, the serious narcotic and other hard drug problems faced by our society”.<sup>24</sup>

This point—that cigarettes are not addictive because people have successfully chosen to quit—appears in other testimony. Horace R Kornegay, President of the Tobacco Institute, agreed in 1994 that it was “exactly right” that smoking was “not...an addiction”, and said that he believed that quitting was a matter of character and willpower.<sup>25</sup> Horrigan also testified that smoking was not addictive, supporting his claim by drawing upon

my own personal experience with people close to me that have been advised for different reasons somewhere in their life not to smoke and they stopped. They didn’t go for any cures. They didn’t sign up anywhere, they just chose not to smoke, just as they chose to smoke.<sup>26</sup>

Donald S Johnston, President and CEO of American Tobacco Company noted that,

people quit, and they quit widespread, 40 million of them. To me that says this is not on the same level as heroin or whatever, and, too, was the feeling that smoking was habitual and was difficult to quit. I personally experienced [that] type of thing, but that didn’t mean it was addictive.<sup>27</sup>

The executives' invocation of heroin ignores the fact that many heroin users are able to quit, and plays upon heroin's status as the national archetype of an addictive drug. The view of addiction is an absolute one: addiction cannot be overcome; therefore, if people do overcome it, then the drug is not addictive. It follows that, since some people successfully quit smoking, they are making a free choice. The overall attitude of the industry executives is perhaps best summarised by Johnston, who commented: "the allegation, or the implication that people are hopelessly hooked on cigarettes; therefore, they are not responsible for their choices they make. I don't agree with it."<sup>28</sup>

It is noteworthy that the statements of several of these executives (Bible, Merryman, Johnston) were taken after January 1998, when the CEOs of Philip Morris (Bible), RJR (Steven Goldstone) and Lorillard (Laurence Tisch) testified to Congress that nicotine was indeed addictive.<sup>29 30</sup> This admission did not deter the executives from persisting in framing addiction as a non-issue; in this view, those who tried to quit smoking and failed simply made a different (poor) choice. However, that choice was their own, and in no way the responsibility of the companies.

### "Informed decisions"

The executives agreed that *information* was crucial to choice. For example, Bible testified that "you can make a choice and the knowledge of the information is available, but if it's not all available, it would be difficult, I agree."<sup>31</sup> Stephen Goldstone, CEO and Chairman of the Board of RJ Reynolds, concurred, saying that "the cards have to be on the table to exercise free choice."<sup>32</sup>

According to the tobacco executives, the cards had long since been laid out. Bible asserted in 1998 that "most people in America, most smokers...in fact most people in the world, recognize that cigarettes are a risk factor, can cause damage",<sup>33</sup> while Frederick Ross Johnson, CEO and President of RJR Nabisco, claimed that "anybody with any common sense, if you read the labels on the package" would know that smoking caused disease.<sup>34</sup>

The argument that all information should be available to the consumer, who would then make a choice, allowed executives to assert that they personally believed smoking was *not* addictive or harmful while holding consumers responsible for making harmful decisions. This position, that smokers knew what they were getting into, applied even when the executives contradicted the "information" they believed consumers should already "know". For example, Andrew H Tisch, Chairman and CEO of Lorillard, was questioned about why a smoker should "know" smoking causes disease, when he himself, under oath, said he was not convinced of it. Tisch replied that "there's a tremendous amount of information out there, and smokers are able to make their own decisions."<sup>35</sup> RJR's Johnson used the same logic, asserting that despite the fact that he did not believe that cigarettes were addictive, and testified before Congress to that effect, "that doesn't mean it [the addictiveness of cigarettes] can't be general knowledge".<sup>36</sup>

Even when executives admitted that tobacco was harmful, they still held consumers responsible. Merlo, of Philip Morris, said, "We admit the fact that smoking does cause disease. But the information was out there and people, unfortunately, make decisions every day in their lives that are harmful."<sup>37</sup> Morgan brushed off the mortality rate of "informed" smokers, saying "For me, the issue is not 50,000 or 100,000 [deaths], as much as it is [that] people know of the potential dangers of their actions, and are they going to take the risks that are involved in it?"<sup>38</sup> However, Morgan hedged a bit about what the consumer should be told, saying "fine, sure,

public has a right to know everything. I just question the value of – of dumping data on the public."<sup>39</sup>

### The obligation of "information"

However, the executives' "information" was discussed as a plethora of material provided or available to consumers, in most cases described in an undifferentiated way in terms of quality or coherence. Philip Morris executives, in particular, argued that their duty was to provide "information". Morgan defined a "reasonably responsive" manufacturer as one that wanted "its customers to know as much about its products or services as was a legitimate issue around it".<sup>40</sup> He wanted consumers to have "all sides of the story"<sup>41</sup> and believed the company "should not try to conduct ourselves in a way that – that would prevent people from making an informed decision. And I think we do that."<sup>42</sup> As Horrigan observed, "if there are appropriate warnings or reservations...that's for the consumer to decide."<sup>43</sup>

Merlo, discussing the information available on the Philip Morris website, said:

"I think that the website discloses a broad range of information from a variety of sources, some of it which we support, some of it which we may not... There are judgment issues here... But we believe that an adult has the right to see the full range of literature and information on a topic and then make the judgment call for themselves...we should not edit or not make that information available...We should just make the broad information available."<sup>44</sup>

"Information" is thus constructed as an object over which these executives exert little moral agency. The industry functions only as a conduit, despite the fact that presumably the manufacturer of a product is in a position to know more about it than anyone else, and the top executives of a company are in the best position to make judgments about the quality of that knowledge. In these executives' view, providing information of whatever type or quality appears to discharge the company of any further obligation toward its products' consumers. Under the pretext of being responsible, the executives avoid taking responsibility for even having a position, although as a manufacturer they obviously support and promote the continued use of the product.

However, even the minimal obligation of providing this undigested mass of "information" was limited. Things that were "common knowledge" did not necessarily have to be reiterated. Morgan denied any responsibility to tell consumers that cigarettes were addictive, saying "I don't think there's a moral obligation to warn people ... I think everybody knows that."<sup>45</sup> The information given did not even have to be true. For example, in this exchange with a lawyer, Morgan asserted that the company was not trying to persuade the consumer of anything in particular:

Morgan: We want people to know that that's what we believe and that they should take what we believe in the context of all the other information that they receive starting in first grade now and that they should make their own evaluation of where they come out. What we are stating is Philip Morris's position. And we want people to believe that's what Philip Morris believes...

Lawyer: And you want them to rely upon what you tell them, do you not?

Morgan: No, I don't accept the word 'rely.' I want them to use what we believe in the context of all the information



that they have available to them, and we want them to make their own decision.

Lawyer: So...when Philip Morris makes a statement concerning its products, it does not really expect the consumer to believe them?

Morgan: No, I'm not saying that... I'm saying that we expect the consumer to understand that that's what we believe. And that to the degree they want to listen to what we believe in the context of all the other information they get from a whole variety of sources, we are telling them what we believe.<sup>46</sup>

This exchange illustrates the curious way in which “beliefs” and “information” are both conflated and distinguished. Beliefs and information are conflated insofar as they are both part of the material that the individual consumer is to take into account when making choices. Yet the repetitive way in which Morgan insists that what the company “believes” should not be taken as final or even reliable suggests that this language has been carefully chosen in order to relieve the company of responsibility for ensuring its veracity or accuracy, thus distinguishing it from other types of “information.” While the company “believes” certain things, the company positions are to be put forth amidst “all the other information”, transferring the responsibility to consumers who must sort through these potentially conflicting “beliefs” for themselves.

In the recently decided United States Department of Justice case against the tobacco industry, the tobacco companies’ argument about their responsibility to help inform the consumer took a different turn. In that case, the industry argued that their information, whether it was correct or not, would have had no effect on consumer behaviour because consumers do not rely on the industry for health information about the product.<sup>47</sup> Thus, the “fully informed” consumer is no longer the industry’s responsibility at all.

### No change to the environment

Although the concepts of adult choice and the absence of addiction dominated executive testimony, on occasion industry executives were asked about interventions designed to prevent tobacco use. Not surprisingly, they were willing to support classroom-based education, which has been shown not to be very effective unless combined with community-based or media-based interventions.<sup>48–49</sup> For example, in 2000, Nicholas Brookes, from B&W, emphasised his company’s support of school-based education, mentioning “one of the programs that we’re funding, in cooperation actually with Philip Morris, is a program that’s called Life Skills Training, and it’s endorsed by the Centers for Disease Control as being actually measurable and effective in reducing kids’ risky endeavors.”<sup>50</sup> What Brookes did not point out is that few school-based programmes have had an effect on smoking behaviour, unless combined with other environmentally based interventions.<sup>48</sup>

Although the responsibility of making “choices” was ostensibly restricted to adults, Brookes asserted the need for “programs that will help children resist peer pressure, and included within that, resist the pressure of advertising.”<sup>50</sup> Note, as previously mentioned, his emphasis on educating youth to resist advertising rather than changing advertising and promotion practices. Thus, a youth who smokes has failed as an individual to resist advertising. Ignored is the fact that the industry spends vastly greater sums on the advertising than they do on the programmes to help youth resist it, while the programmes themselves are of questionable demonstrated value except for industry public relations purposes.<sup>51</sup>

## DISCUSSION

The tobacco industry is known to strategically use the term “adult choice” to focus attention on individual smokers.<sup>51–52</sup> The tobacco industry’s deployment of the concept of “information”, however, has not been examined as closely, except in the context of advertising.<sup>53–57</sup> This paper expands on these analyses to cover other contexts in which the industry uses a carefully constructed idea of “information” to its advantage.

One important context is that of health education and prevention. The executives repeatedly claimed that their duty was to provide “information” to consumers, who would then make their own choices. The “information” discussed was offered outside the normal marketing channels of advertising and promotion; it was available instead in public statements, websites, and materials unrelated to marketing specific brands. Consumers who might be sceptical of advertising claims would reasonably expect that such “information”, provided as such in an ostensibly “impartial” way, would be reliable. However, whether that information was accurate, true, or contradictory was beside the point for these executives; “information” was used primarily as a mechanism to displace agency and shift responsibility for the “decision” to smoke to consumers, so accuracy was not a relevant factor.

Velasquez<sup>58</sup> distinguishes two types of corporate responsibility. In his formulation, responsibility can take one of two forms: (1) accepting blame; or (2) obligation or duty. Our analysis suggests that the industry wishes to avoid both types of responsibility and tries to do so by joining them. Their interest in limiting their duty to “inform” and their use of information as a tool for deflecting blame are problematic for public health. To the degree that policymakers and the public accept this limited formulation of corporate responsibility, the industry gains strategically.

What should concern those who work in tobacco control is that the health belief model also relies on the idea of “information” in its assumption that individuals will change their health behaviour through a self-consciously rational, information-based process. This assumption may ultimately work to the advantage of the industry for at least two reasons.

First, two manifestations of these models—information deficit/rational models and affective education models—have been shown not to work at all on tobacco use prevention.<sup>59</sup> The flaw in using such models to prevent smoking is that they do not take fully into account the degree to which the environments in which people are living and working have been influenced by the tobacco industry to both subtly and overtly promote smoking, through multi-billion dollar advertising and promotion efforts which rely on creating illusions about the product and the consumer.

Second, the executives’ claim that their duty is merely to provide information may contain a hidden motive: tobacco companies have argued against advertising bans on the principle that consumers need the “information” these provide.<sup>55–56–60</sup> Accepting a model for health education that privileges the provision of information to individual consumers may assist the tobacco industry in making such an argument. Although most health educators would not consider tobacco industry advertising and promotion to be the kind of information they would like consumers to use, it must be considered part of the “range” of information tobacco industry executives would like considered; otherwise, it is doubtful that they would spend such enormous sums funding it.

This use of “individuals” and “information” by the executives suggests that it is important for tobacco control advocates to stress social-ecological measures rather than

## What this paper adds

This paper is one of the first to analyse tobacco industry legal defences from the standpoint of their congruency with individual rational choice theories. We highlight how important it is that tobacco control advocates and health educators emphasise multi-level, multi-sectoral interventions as the key to tobacco use prevention. Programmes based entirely or predominantly on notions of individual decision-making are less effective in tobacco control efforts. Further, they may inadvertently lend support to the tobacco industry's preferred framing of tobacco-caused diseases as the result of "unfortunate but informed" individual choices. We know of no other work that makes this connection.

adopting models that may reinforce industry framing. In a recent meta-analysis of "what works" in tobacco control,<sup>48</sup> the most effective interventions were those that changed the environment, instead of focusing on the individual. For example, the two most effective tobacco use prevention programmes were tobacco tax increases and smoke-free environments. Neither of these is education based; both seek to change environments rather than individual behaviour. The third most effective intervention was media campaigns. While media campaigns may seek to educate individuals, they may also be advocacy based and work to change the policy environment and the public image of the tobacco industry. They also alter the message content coming from the media, counteracting at least some of the tobacco industry's large media presence.

Social-ecological models of health acknowledge the need for a multifaceted approach to tobacco use prevention, understanding that individual behaviour influences the environment and is influenced by environment.<sup>4 61</sup> The focus is not on an individual and his or her decision to smoke; instead, these approaches emphasise creating awareness about who creates the environment that promotes or sustains smoking, vesting moral agency not only within smokers, but with the industry as well. "Information" as an undifferentiated mass of "facts" may be more easily problematised in such approaches, which encourage consideration of how different sources of information may have differing underlying motivations and conflicts of interest. Such models may also be more compatible with critical educational approaches, which seek to change community perceptions and mobilise communities toward structural change.<sup>62</sup>

The logic of tobacco executive testimony is thus informative to tobacco control advocates. While executives seek to hide behind the idea that they merely provide information about a product that people can choose to use or not, tobacco control advocates must point out that "information" is not value-free and help the public understand the way in which the industry seeks to use this idea to shift blame. Pointing out the strategic ways in which particular types of "information" are provided by the tobacco industry can also be helpful.<sup>63</sup>

Tobacco industry "solutions" to the massive destruction caused by tobacco products hinge entirely on individual decision-making, yet the most effective solutions are those in which societal decision-making creates more favourable environments for healthy behaviour, such as smoke-free policies, tax increases, and media advocacy. Over-reliance on individual and interpersonal rational choice models may have the effect of validating the industry's model of smoking and cessation behaviour, in turn absolving it of responsibility for smokers' deaths and diseases and rendering invisible the "choices" the industry has made and continues to make in promoting the most deadly consumer product ever made.

## ACKNOWLEDGEMENTS

The authors wish to thank Robin Hobart, MPP, MPH, Julia Buss, RN, MS, and John Tumolo, BA, for their assistance with data coding.

## Authors' affiliations

**E D Balbach**, Tufts University, Medford, Massachusetts, USA

**E A Smith, R E Malone**, University of California at San Francisco, San Francisco, California, USA

This work was supported by grants from the National Cancer Institute (#CA087486) and the American Legacy Foundation (#6211) to the Michigan Public Health Institute, Center for Tobacco Use Prevention and Research (Okemos, Michigan, USA). The views expressed in this paper do not necessarily represent those of the National Cancer Institute, the American Legacy Foundation, or the Foundation's staff or Board of Directors.

## REFERENCES

- 1 Janz N, Champion V, Strecher V. The health belief model. In: Glanz K, Rimer B, Lewis F, eds. *Health behavior and health education*, 3rd ed. San Francisco: Jossey-Bass, 2002:45-66.
- 2 Montano D, Kasprzyk D. The theory of reasoned action and the theory of planned behavior. In: Glanz K, Rimer B, Lewis F, eds. *Health behavior and health education*, 3rd ed. San Francisco: Jossey-Bass, 2002:67-98.
- 3 Strassman D. Not a free market: The rhetoric of disciplinary authority in economics. In: Ferber MA, Nelson JA, eds. *Beyond economic man: feminist theory and economics*. Chicago: University of Chicago Press, 1993:54-68.
- 4 Stokols D. Establishing and maintaining healthy environments: Toward a social ecology of health promotions. *Am Psychol* 1992;**47**:6-22.
- 5 Minkler M. Personal responsibility for health? A review of the arguments and the evidence at century's end. *Health Educ Behav* 1999;**26**:121-40.
- 6 Green DP, Shapiro I. The nature of rational choice theory. In: Green DP, Shapiro I, eds. *Pathologies of rational choice theory*. New Haven: Yale University Press, 1994:13-32.
- 7 Glanz K, Rimer BK, Lewis FM, eds. *Health behavior and health education*. San Francisco: Jossey-Bass, 2002.
- 8 Davis RM, Douglas CE, Beasley JK. The Tobacco Deposition and Trial Testimony Archive (DATTA) project: origins, aims and methods. *Tobacco Control* 2006;**15**(suppl IV):iv4-8.
- 9 Taylor SJ, Bogdan R. *Introduction to qualitative research methods*. New York: John Wiley & Sons, 1998.
- 10 Maxwell JA. *Qualitative research design: an interactive approach*. Thousand Oaks, California: SAGE Publications, 1996.
- 11 Horrigan Jr EA. Liggett Group. *Broin v. Philip Morris Companies Inc.*: Circuit Court of the Eleventh Judicial Circuit, in and for Dade County, Florida, 1994:114.
- 12 Heimann RK, Ph. D. American Tobacco Company. *Horton v. American Tobacco Co.*: Circuit Court of Holmes County, Mississippi, 1988:33.
- 13 Bible G. Philip Morris Companies. *Lucier v. Philip Morris Inc.*: Superior Court of the State of California, 2002:3436.
- 14 Morgan J. Philip Morris USA. *Florida v. American Tobacco Co.*: Circuit Court of the Fifteenth Judicial Circuit in and for County of Palm Beach, Florida, 1997:50.
- 15 Merlo E. Philip Morris USA. *Boeken v. Philip Morris Inc.*: Superior Court of the State of California for the County of Los Angeles, 2001:33.
- 16 MacKay J, Eriksen M, Shafey O. *The tobacco atlas*, 2nd ed. Geneva: World Health Organization, 2006. [http://www.cancer.org/docroot/AA/content/AA\\_2\\_5\\_9x\\_Tobacco\\_Atlas.asp](http://www.cancer.org/docroot/AA/content/AA_2_5_9x_Tobacco_Atlas.asp).
- 17 US Department of Health and Human Services. *The health consequences of smoking: nicotine addiction, A report of the Surgeon General*, 1988. Rockville, Maryland: Public Health Service, Centers for Disease Control, Office on Smoking and Health, 1988 (DHHS Publication No (CDC) 88-8406).
- 18 Slade J, Bero LA, Hanauer P, et al. Nicotine and addiction. The Brown and Williamson documents. *JAMA* 1995;**274**:225-33.
- 19 Philip Morris USA. Tobacco Marketing Five Year Plan 740600. Philip Morris, 1974. <http://legacy.library.ucsf.edu/tid/kqs74e00>.
- 20 Duffy K, Unk. Younger Adult Smokers. RJ Reynolds, 1980. <http://legacy.library.ucsf.edu/gnp69d00>.
- 21 Bible G. Philip Morris Companies. *Minnesota v. Philip Morris Inc.*: State of Minnesota, District Court County of Ramsey, Second Judicial District, 1998:78.
- 22 Bible G. Philip Morris Companies. *Minnesota v. Philip Morris Inc.*: State of Minnesota, District Court County of Ramsey, Second Judicial District, 1998:6326.
- 23 Merryman WN. Tobacco Institute. *Lucier v. Philip Morris Inc.*: Superior Court of the State of California, 2002:3448.
- 24 Tobacco Institute TI. [Press release]. Tobacco Institute, 29 July 1988. <http://legacy.library.ucsf.edu/tid/jpf92100>.
- 25 Kornegay HR. The Tobacco Institute. *Broin v. Philip Morris Inc.*: Circuit Court of the Eleventh Judicial Circuit in and for Dade County, Florida, 1994:122.
- 26 Horrigan Jr EA. Liggett Group. *Broin v. Philip Morris Inc.*: Circuit Court of the Eleventh Judicial Circuit in and for Dade County, Florida, 1994:50.
- 27 Johnston DS. American Tobacco Company. *Local No. 17 Bridge & Iron Workers Insurance Fund v. Philip Morris Inc.*: United States District Court Northern District of Ohio Eastern Division, 1999:2388.

- 28 **Johnston DS.** American Tobacco Company. *Local No. 17 Bridge & Iron Workers Insurance Fund v. Philip Morris Inc.* : United States District Court Northern District of Ohio Eastern Division, 1998:142.
- 29 **Torry S,** Schwartz J. Contribute tobacco executives admit health risks before Congress. *Washington Post* 1998 January 30; Sect 15.
- 30 **Meier B.** Tobacco executives wax penitent before House panel in hopes of preserving accord. *New York Times* 1998 January 30; sect 15.
- 31 **Bible G.** Philip Morris Companies. *Florida v. American Tobacco Co.* : Fifteenth Judicial Circuit Court in and for Palm Beach County, Florida, 1997:0019.
- 32 **Goldstone S.** RJR Nabisco Holdings Corporations. *Dunn [Wiley] v. RJR Nabisco Holdings Corps.* Delaware County Superior Court, 1998:3260.
- 33 **Bible G.** Philip Morris Companies. *Minnesota v. Philip Morris Inc.* : State of Minnesota, District Court County of Ramsey, Second Judicial District, 1998:5709.
- 34 **Johnson FR.** RJR Nabisco. *Minnesota v. Philip Morris Inc.* : State of Minnesota District Court County of Ramsey Second Judicial District, 1997:50.
- 35 **Tisch AH.** Lorillard Tobacco. *Minnesota v. Philip Morris Inc.* : State of Minnesota District Court County of Ramsey Second Judicial District, 1997:49.
- 36 **Johnson FR.** RJR Nabisco. *Minnesota v. Philip Morris Inc.* : State of Minnesota District Court County of Ramsey Second Judicial District, 1997:282.
- 37 **Merlo E.** Philip Morris USA. *Boeken v. Philip Morris Inc.* : Superior Court of the State of California for the County of Los Angeles, 2001:4474.
- 38 **Morgan JJ.** Philip Morris USA. *Florida v. American Tobacco Co.* : Circuit Court of the Fifteenth Judicial Circuit in and for the County of Palm Beach, Florida, 1997:52.
- 39 **Morgan JJ.** Philip Morris USA. *Minnesota v. Philip Morris Inc.* : State of Minnesota District Court County of Ramsey Second Judicial District, 1997:38.
- 40 **Morgan JJ.** Philip Morris USA. *Whiteley v. Raybestos-Manhattan Inc.* : The Superior Court of the State of California in and for the City and County of San Francisco, 2000:00127.
- 41 **Morgan JJ.** Philip Morris USA. *Minnesota v. Philip Morris Inc.* : State of Minnesota District Court County of Ramsey Second Judicial District, 1997:69.
- 42 **Morgan JJ.** Philip Morris USA. *Minnesota v. Philip Morris Inc.* : State of Minnesota District Court County of Ramsey Second Judicial District, 1997:41.
- 43 **Horrigan Jr EA.** Liggett Group. *Brain v. Philip Morris Inc.* : Circuit Court of the Eleventh Judicial Circuit in and for Dade County, Florida, 1994:128.
- 44 **Merlo E.** Philip Morris USA. *Whiteley v. Raybestos-Manhattan Inc.; Taylor v. Philip Morris Inc.* Superior Court of the State of California County of San Francisco, 2000:00152-00153.
- 45 **Morgan JJ.** Philip Morris USA. *Texas v. American Tobacco Co.* : United States District Court for the Eastern District of Texas Texarkana Division, 1997:28-29.
- 46 **Morgan JJ.** Philip Morris USA. *Texas v. American Tobacco Co.* : United States District Court for the Eastern District of Texas Texarkana Division, 1997:55.
- 47 **Blackstone B.** Tobacco witness: Health info has little effect on smoking: Dow Jones Newswire 2005 May 24 [http://money.excite.com/jsp/nw/nwdt\\_rt\\_top.jsp?cat=TOPBIZ&feed=dji&src=704&section=news&news\\_id=dji-00071620050524&date=20050524&alias=/alias/money/cm/nw](http://money.excite.com/jsp/nw/nwdt_rt_top.jsp?cat=TOPBIZ&feed=dji&src=704&section=news&news_id=dji-00071620050524&date=20050524&alias=/alias/money/cm/nw).
- 48 **Levy D,** Chaloupka F, Gitchell J. The effects of tobacco control policies on smoking rates: a tobacco control scorecard. *Journal of Public Health Management and Practice* 2004;**10**:338-53.
- 49 **Glantz SA,** Mandell LL. Since school-based tobacco prevention programs do not work, what should we do? *J Adolesc Health* 2005;**36**:157-9.
- 50 **Brookes N.** Brown and Williamson. *Howard Engle vs. R.J. Reynolds*: Circuit Court, Dade County, FL, 2000:68.
- 51 **Landman A,** Ling PM, Glantz SA. Tobacco industry youth smoking prevention programs: Protecting the industry and hurting tobacco control. *Am J Public Health* 2002;**92**:917-30.
- 52 **McDaniel PA,** Malone RE. Understanding Philip Morris's pursuit of US government regulation of tobacco. *Tob Control* 2005;**14**:193-200.
- 53 **Ringold DJ,** Calfee JE. The informational content of cigarette advertising - 1926-1986. *Journal of Public Policy and Marketing* 1989;**8**:1-23.
- 54 **Pollay RW.** Filters, flavors, flim-flam, too - on health information and policy implications in cigarette advertising. *Journal of Public Policy and Marketing* 1989;**8**:30-9.
- 55 **Pollay RW,** Dewhirst TA. Premiere example of the illusion of harm reduction cigarettes in the 1990s. *Tob Control* 2003;**12**:322-32.
- 56 **Pollay RW.** Considering the evidence, no wonder the court endorses Canada's restrictions on cigarette advertising. *Journal of Public Policy and Marketing* 2004;**23**:80-8.
- 57 **Ringold DJ,** Calfee JE. What can we learn from the informational content of cigarette advertising? A reply and further analysis. *Journal of Public Policy and Marketing* 1989;**9**:30-41.
- 58 **Velasquez M.** Debunking corporate moral responsibility. *Business Ethics Quarterly* 2003;**13**:531-62.
- 59 **Lantz PM,** Jacobson PD, Warner KE, et al. Investing in youth tobacco control: a review of smoking prevention and control strategies. *Tob Control* 2000;**9**:47-63.
- 60 **Chapman S.** Advertising as information. *Tob Control* 1999;**8**:348.
- 61 **McLeroy KR,** Bibeau D, Steckler A, et al. An ecological perspective on health promotion programs. *Health Education Quarterly* 1988;**15**:351-77.
- 62 **Freire P.** *Education for critical consciousness.* New York: Continuum Publishing Company, 1990.
- 63 **Smith EA,** Malone RE. PM's website: Public health or public relations, National Conference on Tobacco or Health; 2005 May 5; Chicago.